Developing a Radio Frequency System for Wireless at Huawei

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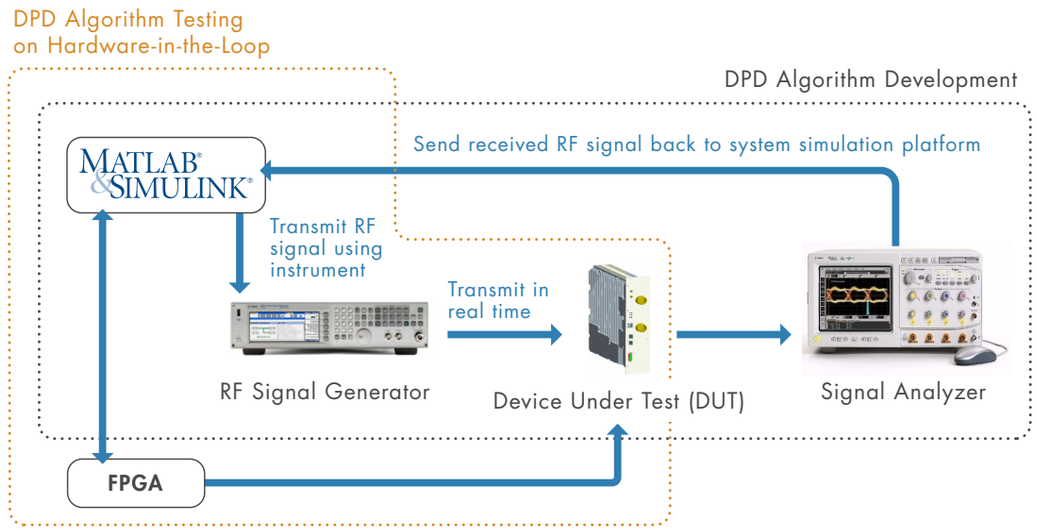
Huawei, in collaboration with MathWorks, developed an intermediate frequency (IF) and radio frequency (RF) system for 5G wireless base stations to achieve greater capacity, higher speed, lower latency, and more energy efficiency.

MATLAB® and Simulink® help Huawei address design and verification challenges including modeling and analysis of hybrid analog-digital systems, accelerating algorithm implementation with code generation, and automating verification. Huawei saved development time by efficiently creating designs early in R&D, which reduced debugging and verification effort.

> MATLAB and Simulink provide a **unified and efficient** system development platform to **bridge** between analog and digital; software and hardware; and algorithm, implementation, and verification.

Advantages of using MATLAB:

- Perform closed-loop simulation of designs containing both analog/RF and digital components, such as digital predistortion (DPD) for RF power amplifiers
- Quickly develop a flexible, high-performance hardware development platform at the beginning of the R&D process using a seamless interface to RF instruments
- Quickly build an automatic verification platform between software and hardware
- Use a single platform for hardware development, including reference models, fixed-point conversion, and automatic C and RTL code generation
- Reuse models for bit-true verification of floating-point, fixed-point, and RTL code



» **Learn more about 5G wireless technology solutions**

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